

WHAT IS CLAIMED IS:

1. An image sensing apparatus comprising:

a first shake detecting section which detects a shake of the image sensing apparatus in a first direction, the first shake detecting section having a first detection characteristic;

a second shake detecting section which detects a shake of the image sensing apparatus in a second direction, the second shake detecting section having a second detection characteristic different from the first detection characteristic; and

a shake correcting section which corrects a shake of the image sensing apparatus based on outputs from the first shake detecting section and the second shake detecting section.

2. The image sensing apparatus according to Claim 1, wherein the first direction is a yaw direction of the image sensing apparatus, and the second direction is a pitch direction of the image sensing apparatus.

3. The image sensing apparatus according to Claim 2, wherein the first and second detection characteristics are in connection with a precision in shake detection.

4. The image sensing apparatus according to Claim 3, wherein the shake detection precision of the second shake detecting section is higher than the shake detection precision of the first shake detecting section.

5. The image sensing apparatus according to Claim 4, wherein the shake detection precision of the second shake detecting section is less influenced by temperature than the shake detection precision of the first shake detecting section.

6. The image sensing apparatus according to Claim 1, wherein the first and second detection characteristics are in connection with a driving frequency of the shake detecting section.

7. An image sensing apparatus comprising:

a yaw sensor which detects a shake of the image sensing apparatus in a yaw direction;

a pitch sensor which detects a shake of the image sensing apparatus in a pitch direction, the pitch sensor having a detection precision higher than the yaw sensor;
and

a shake correcting section which corrects a shake of the image sensing apparatus based on an output signal

from the yaw sensor and an output signal from the pitch sensor.

8. The image sensing apparatus according to Claim 7, wherein the pitch sensor has a smaller temperature-dependent sensitivity variation than the yaw sensor.

9. The image sensing apparatus according to Claim 7, wherein the yaw sensor and the pitch sensor have driving frequencies different from each other.

10. The image sensing apparatus according to Claim 7, further comprising:

a temperature sensor which detects a temperature of at least one of the yaw sensor and the pitch sensor; and

an output signal correcting section which corrects the output signal from at least one of the horizontal-direction shake detecting sensor and the vertical-direction shake detecting sensor based on the detection result from the temperature sensor to thereby cancel the output signal variation due to the sensitivity variation caused by a change in the temperature.

11. The image sensing apparatus according to Claim 10, further comprising:

a lookup table which stores correction coefficients in correlation to detection results outputted from the temperature sensor,

wherein the output signal correcting section selects a suitable correction coefficient from the correction coefficients in the lookup table based on a detection result from the temperature sensor, and corrects the output signal from at least one of the yaw sensor and the pitch sensor based on the selected correction coefficient.

12. The image sensing apparatus according to Claim 7, further comprising:

a temperature sensor which detects a temperature of the pitch sensor; and

an output signal correcting section which corrects the output signal from the pitch sensor based on a detection result from the temperature sensor to thereby cancel the output signal variation due to the sensitivity variation caused by a change in the temperature.

13. The image sensing apparatus according to

Claim 12, further comprising a lookup table which stores correction coefficients in correlation to detection results outputted from the temperature sensor, wherein the output signal correcting section selects a suitable correction coefficient from the correction coefficients in the lookup table based on a detection result from the temperature sensor, and corrects the output signal from the pitch sensor based on the selected correction coefficient.

14. The image sensing apparatus according to Claim 7, further comprising:

an image sensor which senses an optical image;

an optical system which focuses the optical image on the image sensor,

wherein the shake correcting section includes a driver which drives at least one of the image sensor and the optical system.

15. The image sensing apparatus according to Claim 7, further comprising an image sensor which senses an optical image, wherein the shake correcting section includes an image processor which processes image data picked up by the image sensor.